OSWER Innovations Pilot

The Effectiveness of Cell Phone Reuse, Refurbishment, and Recycling Programs

The Office of Solid Waste and Emergency Response (OSWER) Assistant Administrator Marianne Horinko in December 2001 initiated a series of innovative pilots to test new ideas and strategies for environmental and public health protection to make OSWER programs more efficient and effective and user-friendly. A small amount of money is set aside to fund creative proposals submitted by OSWER Headquarters and Regional employees. EPA employees are encouraged to talk to States, Tribes, local government and external stakeholders about proposal ideas and partner on a project. The creative projects test approaches to waste minimization, energy recovery, recycling, and land revitalization that may be replicated across various sectors, industries, communities and regions. We hope these pilots will pave the way for programmatic and policy recommendations by demonstrating the environmental and economic benefits of creative, innovative approaches to the difficult environmental challenges we face today.

BACKGROUND

In 2001, cell phone use in the United States surged to over 128 million subscribers. On average, these phones are used for only 18 months before being replaced. By 2005, approximately 130 million cell phones (65,000 tons) will be retired annually. While the electronics segment of the waste stream accounts for less than 5% of municipal waste, it is growing much faster than the waste stream as a whole. Persistent, bioaccumulative toxins (such as arsenic, antimony, beryllium, cadmium, copper, lead, nickel, and zinc) and brominated flame retardants in cell phones will eventually enter the municipal waste stream, and become an increasing burden for local governments across the country.

At present, retired cell phones have some value and there are a number of programs that promote the refurbishment, reuse, and recycling of cell phones. While the percent of total cell phones taken back through these programs has been very small, the increasing visibility of this issue may inspire more effective national take-back/reuse programs resulting in significantly greater impact.

PILOT APPROACH

INFORM, Inc., in partnership with U.S. EPA Region 2 will examine selected cell phone donation and take-back programs in the United States. As a means of evaluating and publicizing the effectiveness of cell phone take-back and donation programs, INFORM will track and report on the number of cell phones collected through such programs, how their value is recaptured through reuse and refurbishment, and how collected phones are ultimately managed at end-of-life. Using this data, the pilot will assess the environmental benefits of these programs.

INNOVATION

Without research into the effectiveness of cell phone donation and take-back programs we do not know whether these programs are sustainable and how they impact the environment. The environmental threats of cell phone waste result from the current disconnect between product design and end-of-life management. The pilot is designed to be a first step towards forging the link between product design and end-of-life management.

BENEFITS

The research can lead to increasing both the quantity and effectiveness of successful donation and take-back programs as a means of diverting cell phones from landfills and incinerators and possibly encouraging environmentally preferable product redesign. The Pilot will estimate the quantity of toxic and other material diverted from landfills and incinerators through these programs.

CONTACTS

Lorraine Graves, U.S. EPA Region 2, 212-637-4099.

Eric Most, Inform, Inc. 212-361-2400 extension 224.

For additional information, visit the EPA OSWER Innovations web site at: www.epa.gov/oswer/IWG.htm